

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-104 (canceled)

Claim 105 (new): High performance filter media comprising nanofibers of diameter less than 1 μm incorporated and processed into internal structure of a filter medium dominantly composed of coarse fibers of diameter greater than 1 μm , said filter media having distally opposite upstream and downstream faces normal to flow therethrough and defining a single layer filter media thickness therebetween, said internal structure being between said faces and within said single layer and comprising a trimodal distribution of fiber diameter comprising a first set of fibers in the diameter range 50 to 500 nm, a second set of fibers in the diameter range 1 to 5 μm , and a third set of fibers in the diameter range 10 to 50 μm , wherein in combination said first set of fibers is supported by said second set of fibers, and said second set of fibers is supported by said third set of fibers, said first set of fibers providing said nanofibers, said second and third sets of fibers providing said coarse fibers.

Claim 106 (new): High performance filter media comprising nanofibers of diameter less than 1 μm incorporated and processed into internal structure of a filter medium dominantly composed of coarse fibers of diameter greater than 1 μm , said filter media having distally opposite upstream and downstream faces normal to flow therethrough and defining a single layer filter media thickness therebetween, said internal structure being between said faces and within said single layer and capturing droplets from a liquid to be filtered, said nanofibers being preferentially wetted by said droplets, said coarse fibers being preferentially non-wetted by said droplets, the combination of said wetting and non-wetting nanofibers and coarse fibers, respectively, creating a differential

10 wettability gradient creating a capillary pressure gradient wicking droplets off said coarse fibers and
facilitating coalescence within and drainage from said internal structure.

Claim 107 (new): High performance filter media comprising nanofibers of diameter less than 1 μm
incorporated and processed into internal structure of a filter medium dominantly composed of
coarse fibers of diameter greater than 1 μm , said filter media having distally opposite upstream and
downstream faces normal to flow therethrough and defining a single layer filter media thickness
5 therebetween, said internal structure being between said faces and within said single layer and
capturing droplets from a liquid to be filtered, said coarse fibers being preferentially wetted by said
droplets, said nanofibers being preferentially non-wetted by said droplets, the combination of said
wetting and non-wetting coarse fibers and nanofibers, respectively, creating a differential
wettability gradient creating a capillary pressure gradient wicking droplets off said nanofibers and
10 facilitating coalescence within and drainage from said internal structure.

Claim 108 (new): High performance filter media comprising nanofibers of diameter less than 1 μm
incorporated and processed into internal structure of a filter medium dominantly composed of
coarse fibers of diameter greater than 1 μm , said filter media having distally opposite upstream and
downstream faces normal to flow therethrough and defining a single layer filter media thickness
5 therebetween, said internal structure being between said faces and within said single layer, said
nanofibers and said coarse fibers having different surface charge characteristics providing a
localized electric field within said internal structure enhancing particle removal from filtered fluid.

Claim 109 (new): High performance filter media comprising nanofibers of diameter less than 1 μm
incorporated and processed into internal structure of a filter medium dominantly composed of
coarse fibers of diameter greater than 1 μm , said filter media having distally opposite upstream and
downstream faces normal to flow therethrough and defining a single layer filter media thickness
5 therebetween, said internal structure being between said faces and within said single layer, said

nanofibers being concentrated at one of said faces and within said single layer and having first portions extending parallel to said one face and having second portions extending normal to said one face, such that said internal structure includes said first nanofiber portions at said one face and within said single layer and includes said second nanofiber portions continuous with said first
10 nanofiber portions and extending into said internal structure normal to said one face and increasing attachment strength to said coarse fibers and reducing de-lamination risk of said nanofibers and reducing pressure drop of fluid flow through said internal structure within said single layer due to increased orientation of nanofibers in the direction of fluid flow normal to said one face.

Claim 110 (new): High performance filter media comprising nanofibers of diameter less than 1 μm incorporated and processed into internal structure of a filter medium dominantly composed of coarse fibers of diameter greater than 1 μm , said filter media having distally opposite upstream and downstream faces normal to flow therethrough and defining a single layer filter media thickness
5 therebetween, said internal structure being between said faces and within said single layer and having said nanofibers distributed unevenly in bundles providing pockets of nanofibers in a matrix of coarse fibers all within said single layer, said pockets providing spatially distinct areas of greater filtration efficiency in said matrix of coarse fibers of lesser filtration efficiency, said nanofibers being provided in low enough concentration such that there is insubstantial difference in flow
10 velocity, relative to media without nanofibers, through said internal structure within said single layer until said nanofiber bundles begin to plug, whereupon flow is increasingly diverted through coarse fiber sections in said matrix between said pockets, such that filtration efficiency is increased, relative to media without nanofibers, at least initially until said nanofiber bundles begin to plug.